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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,090	04/23/2004	Tohru Koyama	50099-254	7582
<div>7590 08/21/2007</div> <div>MCDERMOTT, WILL & EMERY 600 13th Street, N.W. WASHINGTON, DC 20005-3096</div>			<div>EXAMINER</div> <div>VAZQUEZ, ARLEEN M</div>	
			<div>ART UNIT</div> <div>2829</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>08/21/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No. 10/830,090	Applicant(s) KOYAMA ET AL.	
	Examiner Arleen M. Vazquez	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 and 11-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species I in the reply filed on 06/28/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 6-7 and 11-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/28/2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Low (US 6,515,494)** in view of **Jain et al. (US 6,061,322)**.

As to claim 1, **Low** discloses in Figure 8 a failure analyzer (80) comprising an analysis plate (46) including a first main surface mounting a sample (64) thereon and a second main surface (surface of 46 opposite to sample 64) opposite to said first main surface; and a failure detector (50,92,94,96) including an optical system (92,94) and detecting a failure caused in said sample (64) using said optical system (Col. 7 Ins 46-

67), wherein a recess (48) is provided in said second main surface of said analysis plate (46), and said failure detector(50,92,94,96) irradiates a light (by 94) onto said sample (64) from a direction of said second main surface (surface opposite to sample 64) of said analysis plate (46). **Low** discloses everything above but fails to teach a protrusion which functions as a solid immersion lens and does not protrude from said second main surface is provided on a bottom surface of said recess. However, **Jain et al.** discloses in Figure 3 a protrusion (SIL 14) which functions as a solid immersion lens and does not protrude from said second main surface is provided on a bottom surface of said recess (36).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify **Low** by having a protrusion, which functions as a solid immersion lens as taught as **Jain et al.** to have an accurate ability to collect and concentrate/focus the light from its source.

As to claim 2, **Low** discloses in Figure 8 said analysis plate (46) is also used as a stage mounting said sample thereon (Col.7 Ins 32-34).

As to claim 8, **Low** discloses in Figure 8 a support member (54) for supporting said sample (64) independently of said analysis plate (46) and a first driver (98,100,102) for moving said analysis plate (46) in parallel to said first main surface.

As to claim 9, **Low** discloses in Figure 8 a second driver (90) for moving said optical system (92,94) of said failure detector in parallel to said first main surface of said analysis plate (46), wherein said first driver (98,100,102) notifies said second driver (90)

of movement information (Col. 7 Ins 46-61) of said analysis plate (46), and said second driver (90) moves said optical system (50) based on said movement information.

As to claim 10, **Low** discloses in Figure 8 a probe (20) coming into contact with said sample (64) on said analysis plate (46); and a driver (86,88) for moving said probe (20) and said sample (64) in parallel to said first main surface of said analysis plate (46) independently of said analysis plate (46) without involving change in positional relationship between said probe (20) and said sample (64).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Low (US 6,515,494)** in view of **Jain et al. (US 6,061,322)** further in view of **Jun (US 6,922,069)**.

As to claim 3, the combination of **Low** in view of **Jain et al.** teaches everything above except for analysis plate is made is of silicon. **Jun** discloses in Figure 1 a plate (10) made of silicon (Col. 3 Ins 22-27).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination of **Low** and **Jain et al.** by having a plate made of silicon as taught as **Jun** to dissipate heat and allow easy transmission of signals through the silicon material.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Low (US 6,515,494)** in view of **Jain et al. (US 6,061,322)** further in view of **Sato et al. (US 4,929,893)**.

As to claim 4, the combination of **Low** in view of **Jain et al.** teaches everything above except for analysis plate is made is of quartz glass. **Sato et al.** discloses in Figure 1 a plate (10) made of quartz glass (Col.4 Ins 56-62).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination of **Low** and **Jain et al.** by having a plate made of silicon as taught as **Sato et al.** to dissipate heat and allow easy transmission of signals through the glass material.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown et al. (US 5,959,461) discloses a "Probe station adapter for backside emission inspection".

Ishii et al. (US 5,493,236) discloses a "Test analysis apparatus and analysis method for semiconductor wafer using obic analysis".

Sakushima et al. (US 6,256,437) discloses "Optical device and its production method".

Fukuoka et al. (US 6,086,453) discloses a "Wafer pattern imaging apparatus".

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arleen M. Vazquez whose telephone number is 571-272-2619. The examiner can normally be reached on Monday to Friday, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2829

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMV



HA TRAN NGUYEN
SUPERVISORY PATENT EXAMINER

08/17/7